



CALIFORNIA POLYTECHNIC STATE UNIVERSITY  
San Luis Obispo, California 93407  
ACADEMIC SENATE  
805.756.1258

**MEETING OF THE ACADEMIC SENATE**  
**Tuesday, November 28, 2006**  
**UU220, 3:10 to 5:00pm**

Time Certain

- 3:10pm I. Minutes: Minutes for the October 31, 2006 Academic Senate meeting will be distributed for approval at the December 5 meeting.
- II. Communications and Announcement(s):
- 3:15 III. Reports:  
Regular reports [Please limit to 3 minutes or less]:
- A. Academic Senate Chair:
  - B. President's Office: [see special reports below]
  - C. Provost:
  - D. Statewide Senate:
  - E. CFA Campus President:
  - F. ASI Representative:
- Special reports [Please limit to 15 minutes or less]:
- 3:40 **President Baker: discussion of educational matters.**
- 4:00 IV. Consent Agenda:  
**Curriculum proposals:** Summaries of recommended changes for CLA and CSM can be viewed at:  
[http://www.academicprograms.calpoly.edu/curric-handbook/summary2007/summary\\_dir2007.html](http://www.academicprograms.calpoly.edu/curric-handbook/summary2007/summary_dir2007.html)
- V. Business Item(s):
- A. **Resolution on Revision of Cal Poly Mission Statement:** Academic Senate Executive Committee, first reading (pp. 2-3).
  - B. **Resolution on Cal Poly Learning Objectives:** Academic Senate Executive Committee, first reading (pp. 4-5).
  - C. **Master of Science in Economics:** Hannings, chair of Curriculum Committee, first reading (pp. 6-8).
  - D. **Recommendation of Academic Senate Curriculum Committee to approve Physics 141** [Recommended proposal: Replace PHYS 131 General Physics (3 lectures, 1 lab) with PHYS 141 General Physics IA (4 lectures)]: Hannings, chair of Curriculum Committee.
- VI. Discussion Item(s):
- 5:00 VII. Adjournment:

Adopted:

**ACADEMIC SENATE  
of  
CALIFORNIA POLYTECHNIC STATE UNIVERSITY  
San Luis Obispo, CA**

**AS-\_\_-06**

**RESOLUTION ON  
REVISION OF CAL POLY MISSION STATEMENT**

- 1 WHEREAS, Cal Poly's existing Mission Statement has not been revised since 1994; and  
2  
3 WHEREAS, Cal Poly needs periodically to reconsider its Mission Statement; and  
4  
5 WHEREAS, such reconsideration will be an expectation in the upcoming WASC accreditation  
6 process; and  
7  
8 WHEREAS, The existing Mission Statement neglects to mention Cal Poly's educational  
9 heritage of "learn by doing"; and  
10  
11 WHEREAS, A new Mission Statement has been developed after consultation between  
12 administration, faculty, and staff, including an Academic Senate retreat; therefore  
13 be it  
14  
15 RESOLVED: That the Academic Senate recommend for approval the attached Cal Poly Mission  
16 Statement.

Proposed by: Academic Senate Executive Committee  
Date: October 10, 2006  
Revised: November 2, 2006  
Revised: November 7, 2006  
Revised: November 17, 2006

*(Revision date: November 17, 2006)*

## ***CAL POLY MISSION STATEMENT***

Cal Poly fosters teaching, scholarship, and service in a learn-by-doing environment where students and faculty ~~work closely together~~ are partners in discovery. As a polytechnic university, Cal Poly ~~emphasizes~~ promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a balanced education in the arts, sciences, and technology, while encouraging cross-disciplinary and co-curricular experiences. As an academic community of life-long learners, Cal Poly values free inquiry, cultural and intellectual diversity, mutual respect, civic engagement, and social and environmental responsibility.

Adopted:

**ACADEMIC SENATE  
of  
CALIFORNIA POLYTECHNIC STATE UNIVERSITY  
San Luis Obispo, CA**

**AS-\_\_\_\_-06**

**RESOLUTION ON  
CAL POLY LEARNING OBJECTIVES**

- 1 WHEREAS, Cal Poly has never formally adopted a set of learning objectives at the institutional  
2 level; and  
3  
4 WHEREAS, A set of “Characteristics of a Cal Poly Graduate” were included in the 1995 report  
5 of the Curriculum and Calendar Task Force entitled *Commitment to Visionary*  
6 *Pragmatism* but were not voted upon by the Academic Senate; and  
7  
8 WHEREAS, The adoption of institutional learning objectives is a requirement for WASC  
9 accreditation; and  
10  
11 WHEREAS, A set of institutional learning objectives has been developed after consultation  
12 between administration, faculty, and staff, including an Academic Senate retreat;  
13 therefore be it  
14  
15 RESOLVED: That the Academic Senate recommend for approval the attached set of  
16 institutional learning objectives for Cal Poly.

Proposed by: Academic Senate Executive Committee  
Date: October 16, 2006  
Revised: November 2, 2006  
Revised: November 7, 2006  
Revised: November 17, 2006

## ***CAL POLY LEARNING OBJECTIVES***

All students who complete an undergraduate or graduate program at Cal Poly should be able to:

<i>Change in listing order</i>	
➤ Think critically and creatively	was 1 now 1
➤ Communicate effectively	was 4 now 2
➤ <del>Learn independently</del>	<del>-----eliminated-----</del>
➤ Demonstrate expertise in a scholarly discipline and understand that discipline in relation to the larger world of the arts, sciences, and technology	was 6 now 3
➤ Work <del>effectively</del> <u>productively as individuals and</u> in groups	was 5 now 4
➤ Use their knowledge and skills to make a positive contribution to society	was 7 now 5
➤ Make reasoned decisions based on an <del>awareness</del> <u>understanding</u> of <del>ethical considerations</del> <u>ethics</u> , a respect for <del>cultural</del> diversity, and a commitment to <del>principles of</del> sustainability	was 8 now 6
➤ Engage in lifelong learning	was 3 now 7



## **Master of Science in Economics**

### **Summary of Proposed Degree Program**

The goal of the proposed MS in Economics degree program is to train students for careers as professional economists. In the most recent comprehensive study of employment outcomes available, the National Science Foundation's "Survey of Recent College Graduates" (NSF 1993), 98% of workers employed under the job title of "economist" stated that they held some form of graduate degree. A master's degree in economics today is the standard entry point into the profession. The proposed MS in Economics degree program is designed to provide students with the high level of technical preparation that is necessary to engage in a professional career in economics. Meeting this goal both supports the mission of Cal Poly to directly involve students with the actual challenges facing their disciplines and affirms the technical character of the university.

The learning objectives for the proposed MS in Economics degree program are: (i) to provide a solid foundation in quantitative methods, (ii) to ground students in the mathematical underpinnings of microeconomic theory and macroeconomic theory, and (iii) to facilitate the integration of economic modeling skills and data analysis techniques in applied research that communicates ideas clearly into hypotheses and apply market data to test them.

The proposed MS in Economics degree program is 45-unit program designed to be completed in 4 quarters. The program is comprised of: (i) a 20-unit core curriculum of quantitative coursework that emphasizes the methodological approach used by economists to analyze market data (Quantitative Methods, Microeconomics, Macroeconomics, and Econometrics I and Econometrics II); (ii) 17-units of advisor approved electives that allow students to customize the program to suit their career interests; and (iii) an 8-unit culminating experience consisting of either a thesis or coursework combined with a written comprehensive exam. The core curriculum is designed to be completed within the first 3 quarters of study (2 courses in Fall Quarter, 2 courses in Winter Quarter, and 1 course in Spring Quarter), and combined with elective courses in the first three quarters in a manner that allows students to apply economic techniques to examine data in areas aligned with their career interests.

The curriculum for the program is shown below, followed by a brief description of the required courses and elective courses.

### Degree Requirements

Required Courses.....	20 units
ECON 510 Quantitative Methods.....	4 units
ECON 511 Microeconomic Analysis.....	4 units
ECON 512 Macroeconomic Analysis.....	4 units
ECON 520 Advanced Econometrics I.....	4 units
ECON 522 Advanced Econometrics II.....	4 units
Advisor Approved Electives.....	17 units
Select additional units at the 400 or 500 level as approved by the graduate advisor.	
Advisor Approved Electives or Thesis.....	8 units
Total Hours.....	45 units

#### **ECON 510 Quantitative Methods (4)**

A review and discussion of the mathematical tools needed for graduate work in economics, including set theory, linear algebra, properties of functions, static and dynamic optimization. 4 lectures. Prerequisite: ECON 408 or MATH 244 or equivalent, and graduate standing, or consent of instructor.

#### **ECON 511 Microeconomic Analysis (4)**

Basic microeconomic theory including theory of the firm, consumer theory, general equilibrium, capital theory, and welfare economics. 4 lectures. Prerequisite: Concurrent with ECON 510 and graduate standing.

#### **ECON 512 Macroeconomic Analysis (4)**

Basic macroeconomic theory including markets for commodities and credit, the demand for money, market-clearing and the labor market, inflation and interest rates, investment, real business cycles and unemployment, economic growth, government consumption and the role of public services, and taxes, transfers, and the public debt. 4 lectures. Prerequisite: ECON 511 and graduate standing.

#### **ECON 520 Advanced Econometrics I (4)**

The use of statistical procedures to measure theoretical economic relationships and to verify and reject theories. Advanced coverage of regression analysis and hypothesis testing. 4 lectures. Prerequisite: ECON 339 or equivalent, ECON 511 and graduate standing.

#### **ECON 522 Advanced Econometrics II (4)**

The use of statistical procedures to deal with simultaneous equations, limited dependent variables and time-series data. Includes methods of instrumental variables, generalized method of moments and maximum likelihood. 4 lectures. Prerequisite: ECON 520 and graduate standing.



**Proposed Economics elective courses at the 500-level**

ECON 500 Individual Study (1-4)  
ECON 532 Environmental and Natural Resource Economics (4)  
ECON 534 International Economics (4)  
ECON 536 Public Economics (4)  
ECON 538 Industrial Economics (4)  
ECON 580 Seminar (1-4)  
ECON 599 Thesis (4)

Economists are employed in a wide variety of occupations. In addition to colleges and universities, major employers of economists include: (i) Banks and other financial institutions, (ii) major industrial enterprises; (iii) State & local government agencies; (iv) Federal government agencies; (v) International organizations such as the United Nations and the World Bank; (vi) Economic consulting firms; and (vii) Non-profit organizations. The proposed MS in Economics degree program will provide students with the appropriate skills to enter the economics profession.

Student demand for the program is driven by strong financial incentives to engage in careers as economists. Quantitatively-proficient students who acquire jobs as economists enjoy a substantial salary premium in the market. The Bureau of Labor Statistics reports a median income level for economists of (\$70,254), which is 50% higher than the median income level among typical occupations selected by students with BS degrees in economics (\$47,032). The projected trend in job growth for economists in the State of California is strong. Over the 2000-2010 period, the forecasted growth in jobs for economists in California is 42.9% and positions for economists are projected to grow much faster than average compared with all occupations in California (California Occupation Guide #253 (2003)). The need for economists in business, industry, and local government occupations is currently not being met by any other program in the County of San Luis Obispo, and the MS in Economics degree program will allow students to tap into high-income jobs that Cal Poly currently is not serving.